

Stacy N. Allen

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Plant Biology Division
Genomics/Microarray Core Facility
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EDUCATION:

M.S., Biology, 1997, Texas Tech University, Lubbock, TX

Thesis Title: Effect of Drought on Leaf Gas Exchange and Carbohydrate
Supply for a Semi-arid, Rhizomatous Oak Shrub, *Quercus havardii* Rybd.

B.S. Biology, 1995, Southwestern Oklahoma State University, Weatherford, OK

WORK EXPERIENCE:

**Research Associate, The Samuel Roberts Noble Foundation, Plant Biology
Division, Genomics Core Facility, 2510 Sam Noble Pkwy, Ardmore, OK
73401, Jan 2006-present, Supervisor: Dr. Yuhong Tang**

I am involved in all aspects of service at the Genomics Core Facility. I am responsible for providing RNA expression profiling and DNA genotyping services using the Affymetrix GeneChip System at the Genomics Core. I also perform most of the gene expression analysis services using quantitative real-time PCR. I am also involved in DNA sequencing using the Applied Biosystems 3730xl DNA Analyzer in small and large scale, and in oligo ordering and processing. I am responsible for the programming of the Beckman-Coulter Biomek FX laboratory automation workstation for various laboratory tasks, i.e. plasmid DNA isolation, BigDye terminator removal, setup of PCR reactions, etc.

**Senior Research Assistant, The Samuel Roberts Noble Foundation, Plant
Biology Division, Genomics Laboratory, 2510 Sam Noble Pkwy, Ardmore, OK
73401, August, 2000 – Jan 2006, Supervisor: Dr. Gregory D. May**

I was involved in several projects: 1. the construction of cDNA libraries from *Cyamopsis tetragonoloba* (Guar); 2. particle bombardment of corn for gene targeting; 3. tissue specific promoter analysis in alfalfa; 4. development and utilization of RNAi vectors for hairy root transformation of *Medicago truncatula*, and 5. in the development of genetic transformation techniques for *M. truncatula*.

**Biological Science Technician, USDA-ARS-Natural Products Utilization
Research Unit, PO Box 8048, University, MS 38677, July 1997 – August 2000,
Supervisor: Dr. Franck Dayan**

Designed and performed experiments for the determination of the phytotoxicity of natural products. Designed and performed experiments for the elucidation of the mode of action of phytotoxic natural products.

Research Assistant, Texas Tech University, MS 3131, Lubbock, TX 79409, June 1, 1997 - June 30, 1997, Supervisor: Dr. Scott Holaday

Performed enzyme assays for sucrose phosphate synthase activities in cotton plants under cold stress.

Teaching Assistant (Plant Taxonomy, Plant Physiology), Texas Tech University, MS 3131, Lubbock, TX 79409, Aug. 1995-May 1997, Supervisors: Dr. Scott Holaday (Plant Physiology), Dr. David Tissue (Plant Physiology), and Dr. Charles Werth (Plant Taxonomy)

Instructor for laboratory sections for plant physiology and plant taxonomy.

Research Assistant, Texas Tech University, MS 3131, Lubbock, TX 79409, May 1996-Aug. 1996, Supervisor: Dr. Scott Holaday

Field research involving measuring leaf gas exchange, leaf water potentials, soil moisture content, root/rhizome and leaf carbohydrates in response to water stress conditions.

WORK RELATED SKILLS:

Affymetrix microarray analysis, DNA sequencing, programming of automated liquid handling robots, nucleic acid isolation and manipulation, PCR, RT-PCR, qRT-PCR, Southern hybridization, cDNA library construction, hairy root transformation of *M. truncatula* and soybean, transformation of various plant species (*M. truncatula*, alfalfa, corn, Arabidopsis), High Performance Liquid Chromatography, as well as basic laboratory equipment (i.e. pH meters, balances, electrophoresis equipment, spectrophotometers, pipettes, etc.). Comfortable with computers and various software.

HONORS:

- USDA Outstanding Merit as Biological Laboratory Technician for the Natural Products Utilization Research Unit (2000)
- USDA Outstanding Merit as Biological Laboratory Technician for the Natural Products Utilization Research Unit (1999)
- USDA Outstanding Merit as Biological Laboratory Technician for the Natural Products Utilization Research Unit (1998)
- Recipient of Texas Tech University Graduate School Summer Research Grant (Summer 1996)
- Recipient of Texas Tech University Biological Sciences Summer Research Stipend (Summer 1996)
- Outstanding Senior in Biological Sciences at Southwestern Oklahoma State University (Spring 1995)
- Beta Beta Beta National Biological Honor Society member (Spring 1995)
- Selected for National Science Foundation/Research Experience for Undergraduates at Texas Tech University (Summer 1994)

- Hobart F. Landreth award for outstanding Biological Sciences Research at Southwestern Oklahoma State University (1994)
- Biology Scholarship at University of Central Oklahoma (Fall 1991)
- Regents Scholarship at University of Central Oklahoma (Fall 1991-Spring 1992)

PUBLICATIONS:

Peer-reviewed Articles

Benedito, V. A., Torres-Jerez, I., Murray, J. D., Andriankaja, A., **Allen, S. N.**, Kakar, K., Wandrey, M., Verdier, J., Zuber, H., Ott, T., Moreau, S., Niebel, A., Frickey, T., Weiller, G., He, J., Dai, X., Zhao, P. X., Tang, Y., Udvardi, M. K. A gene expression atlas of the model legume *Medicago truncatula*. *The Plant Journal*, Accepted 2008.

Anand, A., Ryu, C. M., Uppalapati, S. R., **Allen, S. N.**, Kang, L., Tang, Y., and Mysore, K. S. Salicylic acid and systemic acquired resistance play a role in attenuating crown gall disease caused by *Agrobacterium tumefaciens*. *Plant Physiology*, 146:703-715. 2008

Naoumkina, M., Torres-Jerez, I., **Allen, S. N.**, He, J., Zhao, P., Dixon, R. A., and May, G. D. Analysis of cDNA libraries from developing seeds of guar (*Cyamopsis tetragonoloba* (L.) Taub). *BMC Plant Biology*, 7:62. 2007

Dayan, F. E. and **Allen, S. N.** Predicting the activity of the natural phytotoxic diphenyl ether cyperine using comparative molecular field analysis. *Pest Management Science*, 56, 717-722. 2000.

Schrader, K. K., Dayan, F. E., **Allen, S. N.**, de Regt, M. Q., Tucker, C. S., and Paul, R. N. Jr. 9,10-Anthraquinone reduces the photosynthetic efficiency of *Oscillatoria perornata* and modifies cellular inclusions. *International Journal of Plant Science*, 161, 265-270. 2000

Romagni, J. G., **Allen, S. N.**, and Dayan, F. E. Allelopathic effects of volatile cineoles on two weedy plant species. *Journal of Chemical Ecology*, 26, 303-313. 2000

Dayan, F. E., Vincent, A., Romagni, J. G., **Allen, S. N.**, Duke, S. O., Duke, M. V., Bowling, J. J., and Zjawiony, J. K. Amino- and urea-substituted thiazoles inhibit photosynthetic electron transfer. *Journal of Agricultural and Food Chemistry*, 48, 3689-3693, 2000.

Dayan, F. E., Hernández, A., **Allen, S. N.**, Moraes, R. M., J. A. Vroman, Avery, M. A., and Duke, S. O. Comparative phytotoxicity of artemisinin and several sesquiterpene analogues. *Phytochemistry*, 50, 607-614. 1999.

Online Publications

Cooper, J.D., Chekhovskiy, K., Harris, A.R., Steele, J.R., **Allen, S.N.**, Gonzales, R.A., Mian, R. and May, G.D. Genomic Sequences from a (GA/CT)_n Repeat-Enriched Library from Tall Fescue (*Festuca arundinacea* Schreb). In: NCBI, National Library of Medicine, National Institutes of Health Nucleotide Genbank (<http://www.ncbi.nlm.nih.gov>.) 2005.

Published Abstracts

Dayan, F.E., J.G. Romagni, **S.N. Allen**, A. Vincent, S.O. Duke, M.V. Duke, J. Zjawiony. 1999. Biological activity of amino- and urea-substituted thiazoles. Proc. Weed Sci. Soc. Am. 39:42. 1999.

Dayan, F.E., **S.N. Allen**, A. Hernández, and R.M. Moraes. Plant responses to phytotoxic sesquiterpene endoperoxide lactones. Proc. South. Plant. Physiol. Soc. 1998.

Dayan, F.E. and **S.N. Allen**. Predicting the activity of natural and synthetic protophyrinogen oxidase-inhibiting phytotoxins. 215th Am. Chem. Soc. Nat. Meeting. AGFD-023. 1998.

Dayan, F.E., A. Hernández, **S.N. Allen**, and R.M. Moraes. Phytotoxic sesquiterpene endoperoxide lactones as potential herbicides. 9th Internat. Congress of Pestic. Chem. 3A-003. 1998.